

How to get
the most
out of your
10 piece

CRAFTSMAN

REG. TRADE MARK

power
wood
boring-bit
set.

This pamphlet explains and illustrates a few of the more common uses and techniques to help you get the most out of this tool.

Craftsman Tools
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Sears, Roebuck and Co.
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INTRODUCTION

In keeping with its policy of providing the most modern developments in the finest quality tools, we present the new Craftsman Power Wood-Bit Set — wood boring tools which are radically new in design but of proven principle.

Including nine cutters with a boring range of $\frac{1}{4}$ " to $1\frac{1}{4}$ ", this Craftsman Power Wood-Bit Set embodies the unsurpassed quality of the famous Craftsman name at a price lower than that of any other set of wood boring bits. This low price is made possible by the unique design of this set which has but one shank for all nine, easily exchanged cutters.

Recommended only for $\frac{1}{4}$ " electric drills and for drill presses, the Craftsman Power Bit Set will prove itself one of your most valuable accessories. Developed particularly for use with fractional horsepower electric hand drills, the new Craftsman Power Wood-Bit will fit all $\frac{1}{4}$ " or larger chucks. The "Triple-Lock" shank with three flat surfaces, perfectly matches the drill chuck jaws, gives you positive locking, and eliminates shank slippage. Even the smallest $\frac{1}{4}$ " electric hand drills can thus be converted to time and labor saving boring machines for holes up to $1\frac{1}{4}$ ".

Carefully engineered clearances permit only the cutting edges to come in contact with the material to be bored. Cutters therefore develop a minimum of friction in operation. Eliminating excess friction permits the more efficient use of these bits in fractional and higher horsepower hand drills.

Besides a substantial saving in time and labor, the Craftsman Power Wood-Bits offer many other advantages. They are the fastest boring tools available, boring easily in all woods, hard

or soft — and in all grains with or against. Because of their design, they are ideally suited to bore pressboard, plastics, and similar materials. They bore thin materials such as plywood and masonite, cleanly and accurately, because they take hundreds of thin shavings rather than the thick coarse chips of hand augers.

Having no screw point they are not dependent on a pulling action but continue to bore cleanly when the cutter end penetrates the material. The bit constantly under the control of the operator makes clean, sharp breakthroughs when necessary.

Precision machined throughout, the cutting edges of these bits are exact in all dimensions, permitting the close tolerance operation frequently required in wood, plastics and similar materials. They are particularly well suited for boring the accurate clean holes required, for example, in the doweling of wood where the dowels must fit snugly in the holes.

The cutter bits (or heads) are made of specially selected "Super-Tuff" steel designed to hold keen, long life edges. Carefully controlled comparative tests have also proven to our complete satisfaction that these bits are the easiest, fastest and cleanest boring bits on the market today, requiring less horsepower in operation. To you, this means less power for operation, less wear and strain on your power tool motors from the use of Craftsman Power Wood-Bits.



INSTRUCTIONS FOR USE

ASSEMBLING CUTTERS TO SHANK

1. Slip the threaded collar (a) back down the shank (b) to retaining ring (c) Fig. 1.

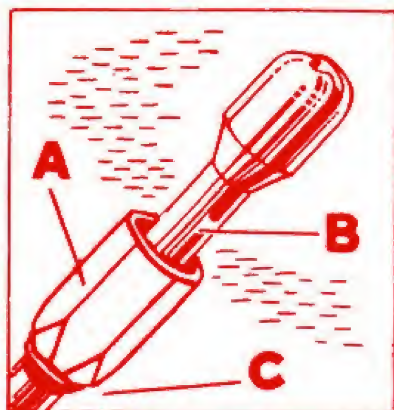


FIG. 1

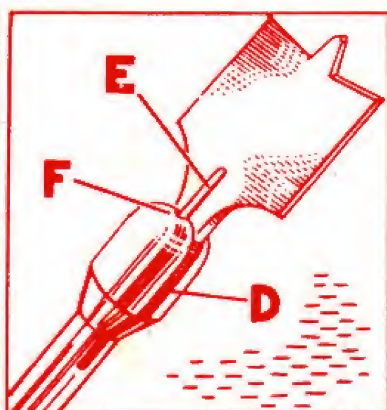


FIG. 2

2. Insert size cutter to be used into slot (d) so that raised rib on cutter's threaded end (e), slips into matching groove (f) on one side of the slot in the shank's head (Fig. 2).

3. Push up threaded collar to engage threads on cutter.

Important: TIGHTEN SECURELY WITH WRENCH

ASSEMBLING SHANK TO CHUCK

Place shank in chuck so that flat surfaces line up with the jaws. Tighten the chuck. The bit is now "Triple-locked", ready for use.

OPERATING

For boring in wood, plastics, masonite, etc., place the point of the bit at the center of the hole to be bored and then turn on the power. For electric hand drills, two-handed boring is preferable although not necessary. One hand on the handle and the other on the drill case will assure positive control in boring (Fig. 3).

Apply sufficient pressure to keep the electric drill boring at full speed. Too much pressure will overload the motor and reduce the efficiency of the drill. The amount of pressure varies with the diameter of the bit. The smaller the hole bored, the greater the pressure which can be applied. These recommendations apply particularly to the smaller fractional horsepower electric hand drills. The greater the horsepower of your drill, the more pressure you can apply.



FIG. 3

SPEED OF OPERATION

These Craftsman Power Wood Bits are designed to operate at any speed between 750 and 3600 r.p.m. such as commonly found in electric hand drills and drill presses. For greater ease in operation, when variable speeds are available it is recommended that speeds from 750 r.p.m. to 1750 be used in boring hard woods and higher speeds up to 3600 for softer woods.

CHIP CLEARANCE AND DEPTH OF HOLES

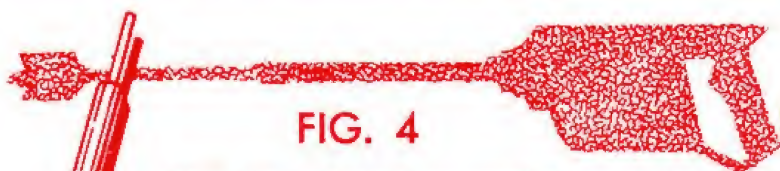


FIG. 4

The helical design and forward thrust of the cutters at once give you greater efficiency and automatic chip clearance. On all but the $\frac{1}{4}$ " , $\frac{3}{8}$ " and $\frac{1}{2}$ " sizes, holes can be bored up to 5" (in depth). Craftsman 12" bit extensions (catalog #9-2090) are available to increase the

capacity to any desired depth (Fig. 4). The $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ " sizes will bore wood up to a maximum of 2" in depth.

WHAT ARE THE BORING LIMITS?

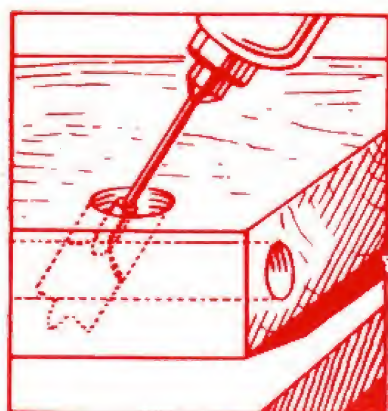


FIG. 5



FIG. 6

Craftsman bits have an almost unlimited capacity and certainly are unequalled in performance. They will continue boring smoothly, for example, even through a hidden cross hole previously bored at any angle in the path of the new hole (Fig. 5). They are capable of boring wide angles impossible for other bits. They bore easily along edges, in corners or in narrow places. They are particularly adapted to boring in narrow, close or otherwise inaccessible places which could not be bored by hand (Fig. 6). They suit themselves perfectly to overlapping boring such as mortising for locks in doors.

TIPS ON GOOD BORING TECHNIQUES

When boring flat stock, particularly smaller pieces, the work should be held in a vise or clamped to a table, as in the case of a drill press (Fig. 7).

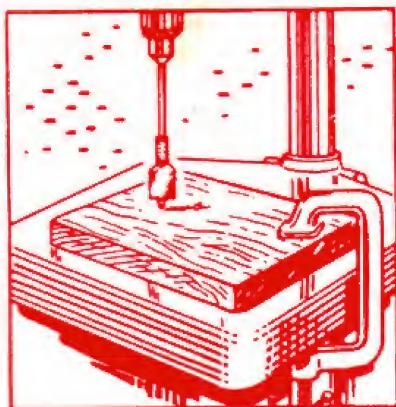


FIG. 7

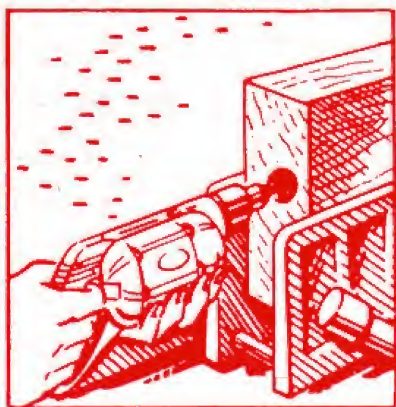


FIG. 8

For edge or end boring with electric hand drill, the work again should be clamped in a vise or to a table for steadying (Fig. 8). In a drill press an auxiliary fence can be clamped to the back of the table (Fig. 9).

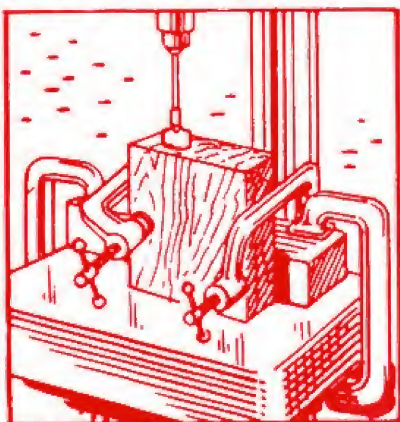


FIG. 9

For boring in the edges of a disk, clamp to a table or in a vise for hand electric boring and use a V block clamped to the table tilted to 90 degrees in a drill press (Fig. 10). For boring in round stock use a V block as shown in Fig. 11.



FIG. 10

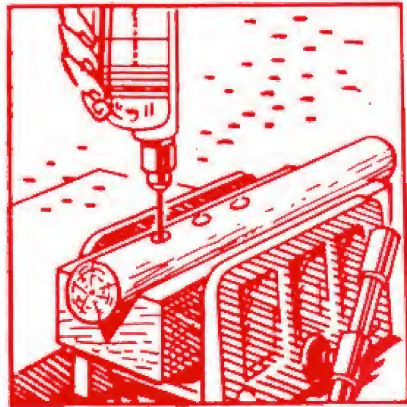


FIG. 11

DEPTH GAUGING

When holes of an exact depth are required, measure the depth on the bit and mark the shank with adhesive or scotch tape to indicate the exact required depth of hole required. Bore until mark is level with wood surface. In a drill press, mark the depth to be bored on the side of the work, lower the cutter of the bit in the press to this mark, set the drill press depth stop, and bore.

MORTISING

Craftsman Bits are excellent tools for fast, easy mortising because they can bore holes closer to each other than can be bored with other conventional bits. This naturally leaves less material to be chiseled out by hand. For mortising with electric hand drill, mark depth to be bored on the shank as described earlier, bore holes to proper depth starting the second and succeeding holes with the point of the bit $\frac{1}{8}$ " or even less from the edge of the preceding hole (Fig. 12).



FIG. 12

ANGLE BORING

When boring with electric hand drill at angles up to 45 degrees, simply place the point of the bit at the center of the hole to be bored and at the desired angle and turn on the power.

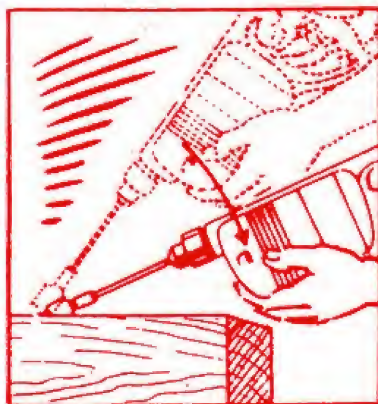


FIG. 13

For even greater angles, begin boring at 45 degrees and increase the angle as soon as the bit takes hold (Fig. 13).

CARE AND SHARPENING OF THE BITS

Craftsman bits reach you with precision machined and ground edges. When resharpening is necessary, it may be done either by hand filing or on an abrasive wheel. For hand sharpening, we recommend the use of a flat 8" Mill file with round edge or a similar file. The flat surfaces of this type file are needed for both horizontal and vertical cutting edges. The round edges will sharpen and blend the inside corners. Clamp the cutters in a vise and file from the back towards the cutting edge. File at the same angle originally ground at the factory (15 degrees) (Fig. 14). After filing, hone lightly by oil-stoning the flats on both sides to remove file

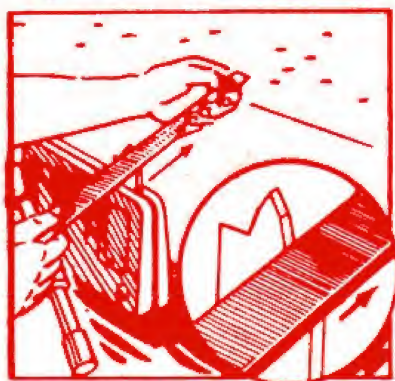


FIG. 14

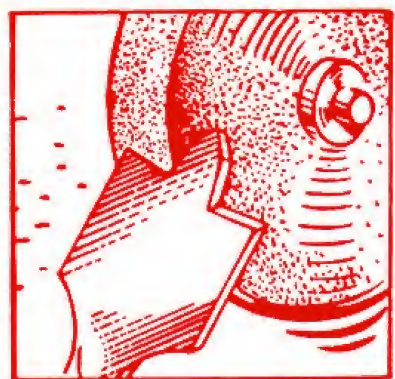


FIG. 15

burrs. In power sharpening, use a fine grain wheel with rounded edges, grinding from the cutting edge to the back, again at a 15 degree angle, applying only sufficient pressure to bring back the edges (Fig. 15). Finish hone as above. Sharpen with cutter in shank for easier handling.

Craftsman Power Wood-Bit cutters are coated at the factory with a special rust preventive for extra protection. This coating of course wears off with use. It is recommended therefore that cutters be wiped occasionally with an oiled rag to extend this protection and protect the cutting edges.

If these simple instructions and recommendations are followed, we guarantee that these Craftsman Power Wood-Bits will give the user complete satisfaction.



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